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I N T E R - O F F I C E C O R R E S P O N D E N C E

Richmond, Virginia

To: .A. Cliff Lilly

Date: November 11, 1988

From: .R. N. Ferguson

Subject: .Update on Plans for Reduced Sidestream Program

Some modifications to the program priorities described in the plan update issued August 9 were indicated as a result of discussions at the 3rd Quarter Planning Conference. This should be considered only as some modifications of plans, not a replacement for the August 9 update.

Models for Reduced Sidestream

Planned efforts on filler modification, core periphery studies, rod density, salt effects and other non-wrapper related sidestream control efforts have been reduced.

Planned efforts on cigarette paper modification in order to reduce sidestream have been increased. Emphasis on novel technology - such as sol-gel methods - and novel materials have enlarged due to several factors. The following examples illustrate the type of priorities being pursued and those to be initiated in the 1st Q, 1989.

- . More extensive interaction with Dr. W. Fink and the research staff at FTR will be initiated with the objective of sharing information on paper properties and performance.
- . More active involvement with Dr. Kallianos in-house studies on the sol-gel process has been initiated.
- . Contact has been established with the sol-gel research program of Dr. Don Schleich at N.Y. Polytechnic and complimentary research studies will be planned for Chemical Research.
- . A position has been made available for a synthetic inorganic chemist to support several needs identified within the department, among them several in support of sidestream reduction.
- . The planned effort at the University of Maine has been expanded. A dual headbox system is being constructed. The contact person there, Dr. David Kraske, has been informed that we will also be expanding the support services we will need them to provide. Plans are being made to use this facility to scale up any paper process made using a sol-gel approach to paper modification.
- . A coater has been added to the hand sheet facility at R&D. A Coresta porosity instrument is on order for this lab.

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- . Plans to evaluate a wider range of inorganic fillers have been made, to provide support for other R&D needs. A BET surface area measurement system has been ordered to support this research.
- . Suggestions from Dr. C. Mattina (consultant) and Dr. Kallianos are being used to develop plans to investigate fluxing agents with improved performance.
- . Dual wrap cigarettes can demonstrate major sidestream reductions. Efforts to interpret this effect and its impact on smoke chemistry are underway.
- . Effort will be initiated to prepare single wraps with dual wrap properties.
- . Tobacco identical materials, tobacco salts, tobacco extracts and fractions will be evaluated in single or double wrap configurations. Evaluation of possible subjective improvements will be a significant component of this effort.
- . Suggestions at the planning conference to evaluate fibers other than flax are being pursued. Several fiber samples are now available.
- . A project to lumen load fibers with inorganics will be funded in early 1989. The work will be done at the U. of Washington.
- . Plans have been made to evaluate chemical modification of fibers to improve physical properties or smoke chemistry. These cannot be initiated until mid 1989.

Methods For Evaluation of Sidestream

A major effort is also continuing to develop and improve methods to evaluate sidestream chemistry and visibility. Only some selected examples of significant areas of priority and activity are cited below.

A. Visibility

The 8 port system will be made operational. Research will then be discontinued with the 5 and 17 port systems. The single port system is still required to support handsheet studies and its use will continue.

B. Sidestream Chamber

Approval has been received for this project and several components have now been ordered. Component evaluation and assembly will be a major commitment for 1989.

C. Odor

The E-2 conference room sidestream odor evaluation study has been completed and documented. No further work is planned in this area.

One other area of alteration in plans should be cited. There is continuing interest in a better execution of the swept device as a new flavor delivery system with no sidestream or CO. A better device will require research on delivery methods and on materials appropriate for use. Research on concepts for such a system is planned for 1989. This research will be evaluated as it progresses and either increased or terminated depending on its progress.

Please refer to the update of August 9 for an overview of other aspects of the programs, such as irritants in smoke, Coresta studies, or resource allocations.

/ds

cc: J. Charles
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